UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/182,933	10/30/1998	GLENN ARTHUR REITMEIER	SAR13070	2555

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EXAMINER
MEISLAHN, DOUGLAS J

ART UNIT	PAPER NUMBER
2132	

DATE MAILED: 06/04/2002

19

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

	Application No.	Applicant(s)
Office Action Summary	09/182,933	REITMEIER ET AL.
	Examiner	Art Unit
	Douglas J. Meislahn	2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>19 March 2002</u> .

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-18 and 22-29</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-18 and 22-29</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: .

DETAILED ACTION

Response to Amendment

1.   This action is in response to the request for reconsideration filed 19 March 2002.

Response to Arguments

2.   Applicant's arguments filed 19 March 2002 have been fully considered but they are not persuasive. Applicant cites a portion of the specification that supports use of the words "buffer behavior" but does not describe how compression produces control information indicative of buffer behavior. Applicant goes on to cite three patents that allegedly show the unexplained portions of the claims; these submissions are an admission on applicant's part that the specification of the instant invention does not explain how compression produces control information indicative of buffer behavior. Applicant goes on to apparently state that MPEG-2 compression produces control information indicative of buffer behavior. This coincides with the examiner's guess that compression that produces control information indicative of buffer behavior is a standard part of MPEG. Applicant neither disputes nor agrees with this.

3.   While originally filed claim 14 serves as its own description, it does not describe itself in sufficient detail to overcome the outstanding 112 rejection.

4.   Applicant points to the apparent contradiction of the examiner taking official notice of a feature that has been rejected as not being supported. The examiner has taken official notice of the material that is guessed to equate to applicant's recitations, not the recitations themselves, which are not supported by the specification. Additionally, if there is a contradiction in the examiner taking official notice of features

that are allegedly not supported, there is also a contradiction in applicant claiming that the features are known to people of ordinary skill in the art but then attempting to challenge the examiner's taking of official notice of those features.

5.   The examiner suggests "corresponding to", "resulting from", or "resulting in" to replace "indicative of".

6.   In response to applicant's argument that Walker et al. and Inoue are nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Walker et al., as can be seen from the title, is concerned with scrambling data. Inoue deals with data transmission security, as demonstrated by the cited sections.

7.   Compression of video signals is covered by MPEG. The cited section of column 7 in Walker et al. discusses buffers, which seemingly contradicts applicant's assertion that buffer behavior is irrelevant to the art of record.

8.   Data in Walker et al. are manipulated while they are in digital format, as is apparent from elements 22 and 24 in figure 1. As such, MPEG is applicable.

9.   Applicant disputes the examiner's equating access rights with buffer utilization levels. This relates to the 112 rejection. What in the specification bars this interpretation? Applicant explains the difference in the arguments. If there is a difference between applicant's use of buffer behavior and those in the prior art,

specifically MPEG, please explain it and point to the sections of the specification that support the difference. The examiner sees this as the most direct route to agreeing on patentable subject matter in the claims.

10.   Applicant has not provided a reasoned argument as to why the examiner's official notice is incorrect, and hence it has been maintained.

Claim Rejections - 35 USC § 112

11.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

12.   Claims 1-18 and 22-29 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. There is no discussion in the specification of the compression of image frames producing control information indicative of buffer behavior. Firstly, there is no teaching of the potential for a causal relationship between the production of the control information and compressing the frames. Secondly, "indicative" does not define any real relationship between the control information and the buffer behavior.

13.   In view of these problems, an analysis of the claims with respect to the prior art has interpreted this feature to be a standard part of MPEG.

Claim Rejections - 35 USC § 103

14.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

15.   Claims 1, 2, 10-13, 15, 18, and 23-26 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Walker et al. (5014310) in view of Inoue (5195134).

Walker et al. display, in lines 24-43 of column 3, a method of scrambling video

data that consists of rearranging pieces of video data using an encryption keystream as

a guide. The keystream corresponds roughly to applicant's index. From line 54 of

column 7 through line 8 of column 8, they teach a way to prepare audio for transmission

that includes compression and scrambling according to the encryption keystreams.

These compressed audio samples are scrambled in the same fashion as the video.

The control data precisely corresponds to applicant's index. There is no teaching of

encrypting the scrambled data stream. Encrypting data that has already been

scrambled, although perhaps not a ubiquitous practice, is known in the art of data

transmission, as evidenced by lines 18-22 of column 3 in Inoue; the encryption has the

obvious advantage of providing increased security to the data. Therefore it would have

been obvious to a person of ordinary skill in the art at the time the invention was made

to encrypt the data of Walker et al. as taught by Inoue. This would increase security.

An apparatus to produce this encrypted, scrambled, compressed data stream is

inherent. A method to recover the data is anticipated as well.

With respect to claim 2, Inoue has taught encryption of the entire signal, and Walker et al. have discussed putting the control data with the rest of the signal. Therefore the control data would also be encrypted. Inoue talks about subscribers in line 26 of column 3, thereby meeting the limitations of 2.

The reason behind the rejection of video versus audio elements should be apparent from Walker et al.'s distinction between audio and video data, and further in view of video compression, e.g., MPEG. Official notice is taken that it is old and well known that MPEG produces control information indicative of buffer behavior in the decompression step. MPEG is a standard and would hence be an obvious environment in which to apply the teachings of Walker et al. and Inoue.

Regarding claim 26, Walker et al. discuss sending the encryption keystream and the video data asynchronously which results, at least temporally, in different distribution channels. This argument could also apply to claim 6, except that claim 3 more narrowly defines the channels as different mediums.

16.   Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al. in view of Inoue as applied to claim 2 above.

Walker et al. in view of Inoue render obvious a system that compresses, mixes, and encrypts data. Control data for the mixing is also encrypted. They do not teach sending the control data to a receiver via a different medium. Official notice is taken that it is old and well known to send control data separately from the actual information. This is especially established in pay television systems; a card will be sent to a client, who puts the card in a machine on the client's television. The data on the card allows

the descrambling of broadcast programming. This method provides a level of security by separating the scrambled data from the key to that data. Walker et al. and Inoue are both concerned with data transmission, and therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to send control data by a different medium, such as a mailed card as is known in the art, the recipient in the combined system of Walker et al. and Inoue. This would increase security.

17.   Claims 4, 5, 17, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al. in view of Inoue as applied to claims 2, 3, 16, 25, and 26 above.

Walker et al. in view of Inoue render obvious a system that compresses, mixes, and encrypts data. They do not teach non-continuous temporal transmission. Official notice is taken that transmission of data, particularly encrypted data, in a non-continuous fashion is old and well known. By providing only part of a cryptogram, an attacker (probably) cannot decrypt any of the cryptogram. This is used in the interlock protocol, which, although concerned specifically with public keys, is applicable to symmetric cryptography. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to increase the security of Walker et al. in view of Inoue by transmitting the data discontinuously. Also, if the data is transmitted as packets, it would inherently be transmitted discontinuously.

18.   Claims 7, 8, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al. in view of Inoue as applied to claims 1 and 28 above.

Walker et al. in view of Inoue render obvious a system that compresses, mixes, and encrypts data. There is no mention in either reference of the segments being a specific size or distributing the segments over many different distribution channels. Official notice is taken that digital broadcast over computer networks is old and well known as a method for data transmission. Data is generally conveyed in packets that are generally the same size, meeting the limitations of claim 7. The networks use many different transmission paths to deliver data to a single source, meeting claim 29. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the teachings of Walker et al. and Inoue's joint transmission system to digital broadcast over networks.

With regard to claim 8, Walker et al. have already been cited as teaching inclusion of control data in segments.

19.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al. and Inoue as applied to claim 1 above.

Walker et al. in view of Inoue render obvious a system that compresses, mixes, and encrypts data. They do not say that a non-predicted information segment is included in the segment. Official notice is taken that it is old and well known to include random information, such as an initialization vector, in data that is to be encoded. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include a non-predicted information frame within each segment of Walker et al. and Inoue, thereby providing an initialization vector for the stream.

20.   Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walker

et al. in view of Inoue as applied to claim 1 above.

Walker et al. in view of Inoue render obvious a system that compresses, mixes,

and encrypts data. Walker et al. also show the inclusion of control data. They do not

say that the step of compressing produces control information indicative of a utilization

level of a decoder buffer. This feature has been interpreted as being access rights for

decompression. Official notice is taken that access rights are an old and well-known

type of control data that are used to indicate parties that are allowed to access a

product. They are especially common in pay-television systems. Therefore it would

have been obvious to a person of ordinary skill in the art at the time the invention was

made for commonly known access rights to be included in the control data of Walker et

al. and Inoue. The time of access rights generation is substantially inconsequential, but

it would have been obvious to produce the rights at the same time as the operation that

they control.

21.   Claims 18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Walker et al. and Inoue as applied to claim 15 above.

Walker et al. in view of Inoue render obvious a system that compresses, mixes, and

encrypts data. They do not specifically teach storing the unencrypted data in random

access memory. Official notice is taken that it is old and well known that random

access storage allows a processor to directly access data. Therefore it would have

been obvious to a person of ordinary skill in the art at the time the invention was made

to use random access memory to store the data used in Walker et al. because the data is not accessed in the order in which it is meant to be viewed or heard.

Conclusion

22.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas J. Meislahn whose telephone number is (703) 305-1338. The examiner can normally be reached on between 9 AM and 6 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barrón can be reached on (703) 305-1830. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.
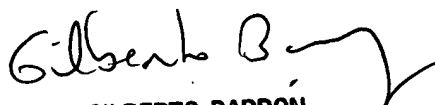
Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703) 305-

3900.

Douglas J. Meislahn
Examiner
Art Unit 2132

DJM
June 1, 2002

GILBERTO BARRON
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